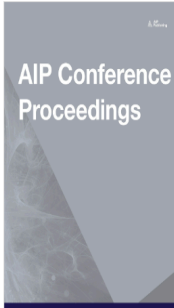


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## Corrosion behaviour of mild steel in waste cooking oil as biofuel

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An attempt has been made to assess the corrosive impact of biodiesel fuel from waste cooking oil (WCO) on mild steel and its different blending ratio with commercial diesel (5 %, 10 %, and 20 %). To depict water contamination, 3% NaCl was used. The metal's corrosion rate was assessed by mass loss and electrochemical methods. As complementary techniques, conductivity was monitored before and after each test. An optical microscope was used to examine the surface morphology. The corrosivity test media and their conductivity were positively correlated. The measured contact angle is obtuse for the metal proposing that oil, ideally wets the metal and in this manner anticipating corrosion. The mild steel samples tested in NaCl were coated with dark deposits that shows the existence of corrosion product. Pitting corrosion was located in O99 and no major changes has been



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